RR-1

CITY OF VANCOUVER

POLICY REPORT
ENVIRONMENT

Report Date:	May 5, 2011
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Meeting Date:	May 31, 2011

TO: Vancouver City Council

FROM: Director of Sustainability

SUBJECT: Vancouver Retrofit Energy Efficiency Financing Pilot Program for One and Two-Family Dwellings

RECOMMENDATIONS:

A. THAT the City proceed with a Retrofit Energy Efficiency Financing Pilot Program for up to 500 homes as a proof of concept for a future on property tax bill green energy financing program.

B. THAT all legal agreements with Vancouver City Savings Credit Union ("Vancity"), Natural Resources Canada, The Vancity Foundation ("the Foundation"), eligible homeowners, and any other required parties be on such terms and conditions as are satisfactory to the City Manager, Director of Finance, and Director of Legal Services and generally on such terms outlined in this report.

C. THAT all such legal agreements, upon approval pursuant to Recommendation B, be executed and delivered by the Director of Legal Services.

D. THAT the City set aside up to $500,000 in an interest-bearing loan loss reserve (to be matched by a contribution of up to $1 million from the Vancity Foundation) as a security for up to $5 million in loans to eligible homeowners under the pilot program on conditions as outlined in the report.

E. THAT no legal rights or obligations will be created by the adoption of these Recommendations unless and until such legal agreements are executed and delivered by the Director of Legal Services.

F. THAT Council instruct the Director of Legal Services to seek from the Provincial Government appropriate amendments to the Vancouver Charter to enable the City of Vancouver to introduce an on-property-tax-bill payment mechanism for improvements on private property that support the City of Vancouver's environmental protection objectives.

G. THAT Staff report back with the results of the pilot program

CITY MANAGER'S COMMENTS

Greenhouse gas (GHG) emissions from homes and other buildings in the City constitute a major contributor to our overall carbon footprint in Vancouver. The City of Vancouver has a goal of reducing GHGs in existing buildings by 20% by 2020. An "on property tax bill green energy financing program" was identified in the "Bright Green Future 2020 Report" as a key strategy for enabling the retrofit of existing homes to energy efficiency with a goal of meeting GHG targets in Vancouver. The strategy is recognized by staff to be a critical tool without which the City will be challenged to achieve many of Council's "greenest city" targets. The retrofit energy efficiency financing pilot program proposed by staff allows the City to test this program, and demonstrates its need to the provincial government while also providing Council and the Vancouver taxpayers with adequate financial protection. The City Manager recommends approval of the Recommendations A through G.

COUNCIL POLICY

In March 2007, Council passed a motion directing staff to begin planning for significant, long range greenhouse gas (GHG) reductions with the eventual goal of becoming a carbon-neutral city.

In July 2007, Council adopted targets to reduce community GHG emissions to 33% below current levels by 2020 and 80% below current levels by 2050. In addition, Council adopted the target of having all new construction in Vancouver GHG-neutral by 2030.

In June 2008, Council adopted the Green Homes Program which included "green building" requirements for newly constructed one and two family homes. As part of the Green Homes Program, Council adopted a set of building by-law amendments directed at reducing the environmental impact of new one and two family dwellings. The amendments made the Vancouver Building By-law one of the "greenest" building codes for one and two family dwellings in the world.

In May 2009, Council endorsed the Passive Design Toolkits as official City of Vancouver publications and approved the City of Vancouver Passive Design Program.

In May 2009, Council received the Greenest City Action Team's (GCAT) Quick Starts Report, which recommended early actions the City can take to help Vancouver become the greenest city by 2020. Council approved a motion directing staff to report back with an implementation plan for the recommended actions.

In October 2009, Council received the GCAT 2020 report and directed the City Manager to work with staff and report back with recommendations on practical implementation steps to meet the targets set out in the report.

SUMMARY

Energy efficiency retrofits are the biggest source of community-wide emission reductions that the City can influence. The undertaking of energy efficiency retrofits in the one and two family dwellings sector is limited by the resources of the homeowner. Staff are recommending a pilot program in partnership with Vancouver City Savings Credit Union ("Vancity") and the Vancity Foundation ("the Foundation")that will provide low interest, long-term financing for energy efficiency retrofits for up to 500 homes as a potential means of addressing this need. The pilot will be aligned with provincial incentives and only finance specific retrofits with demonstrated results. The pilot requires that the City of Vancouver and the Foundation set aside $500,000 and $1 million respectively to be held in trust and used as security for up to $5 million of loans from Vancity to qualifying homeowners for eligible energy efficiency retrofit projects. The goal of this pilot, if the concept is proven successful, is to create a long-term sustainable financing solution that is offered by multiple financial institutions in addition to Vancity and does not require security from the City or philanthropic capital such as that being provided by the Foundation. Key to a sustainable program in the future would be an amendment of the Vancouver Charter to allow for this type of financing to be charged against the title to the property in the same manner as real property taxes. If such a Charter amendment were to be enacted by the Province, there will be no need for a loan loss reserve for this type of financing program. The City's tax collection authority would be sufficient to enable equivalent or better interest rates and amortization.

PURPOSE

The purpose of this report is to have Council approve the retrofit energy efficiency financing pilot program as proposed. This will require the approval of setting aside $500,000 of City funds in trust in an interest bearing account with Vancity for the term of the project (up to 10 years or upon payout of the last loan), or until a Charter amendment is achieved. The funds will be used as loan security for the pilot program and could be accessed by Vancity in the event of defaults and under specific conditions as detailed on pg. 6 - "What are the Risks to the City". The second purpose is to request Council to instruct the Director of Legal Services to submit a formal request to the Provincial Government to develop appropriate amendments to the Vancouver Charter to enable development of a long-term sustainable financing program without the need for a loan loss reserve arrangement.

BACKGROUND

The City of Vancouver has a goal of reducing GHGs in existing buildings by 20% by 2020. "Green retrofits" improve the energy efficiency of buildings, improve comfort, and reduce both GHG emissions and water consumption. Green upgrades also reduce the cost of heating and electricity to homeowners and businesses with even greater implications for low-income homeowners, who typically spend a greater portion of their monthly income on energy bills.

While green retrofits will save money over the long-term, the upfront cost of implementing the upgrades can be prohibitive. As such, the City is seeking a cost-effective way to overcome the initial financial hurdle of undertaking green retrofits by unlocking the potential business cases where they exist for property owners.

The Retrofit Energy Efficiency Financing pilot program is a tool similar to Local Improvement Charges (LICs) typically used by local governments in Canada for upgrades to public infrastructure. It is gaining popularity in North America as a key tool for attaching retrofit financing to a property title rather than to the owner in order to have it repaid via property tax. Many programs known as Property Assessed Clean Energy (PACE) have been launched either by energy utilities or municipal governments in the United States. The loan is typically amortized over a period that makes payments equal to or lesser than the energy and/or water savings associated with the green retrofit. PACE payments are collected by municipal government as part of a home's property tax where defaults are substantially lower than other financial products. This increased security, combined with the potential scale of a program that a municipal partner can provide, allows for lending terms that homeowners may not be able to achieve on their own.

At the direction of Council following their approval of the "Bright Green Future" document, discussions with potential partners started in 2010 around developing and launching a similar program in Vancouver. During these discussions and through staff exploration of the matter, two issues came to light. First, that Vancouver lacks specific legislative authority to collect on home energy efficiency retrofit loans with the same powers it has to collect on property taxes under the Vancouver Charter. Second, that prior to requesting an amendment to the Vancouver Charter, it would be beneficial to conduct a pilot program to demonstrate or "prove" the potential of such a mechanism for achieving civic objectives. These factors led to the development of this pilot program. Vancity and the Foundation were selected as the pilot program partners after a request for expressions of interest was sent to potential program partners. The co-development of this pilot program with Vancity is a non exclusive relationship and future programs may use other service providers.

DISCUSSION

The Need for New Financing Tools:
Staff currently project that in order to achieve the Council adopted target of reducing GHGs in the community by 33% by 2020, 175,000 tonnes of sustained annual reductions will have to come from existing buildings. This will also address the proposed target of a 20% reduction in energy and GHGs from existing buildings by the GCAT. Staff further estimate that of this 175,000 tonnes, 90,000 could come from an effective retrofit financing program that is aligned with incentives and regulation. Without the appropriate financing tools GHG savings could be impacted by as much as 50,000 tonnes. A loss of this magnitude is enough to jeopardize the ability of the City to achieve the ambitious GHG reduction goals it has targeted community-wide over the next ten years.

A major potential benefit of a retrofit energy efficiency financing program, if successful, is its ability to create new "green jobs" and inject new capital into the local building market. Surveys of potential customers, analysis of past subsidy programs, and studies on the age and efficiency of the Vancouver housing stock all indicate that it is possible to scale an effective retrofit financing program up to three thousand homes per year within three years. A program of this size would inject an additional $25 million into the local green renovation market, thereby creating thousands of new "green" jobs. These would be new jobs that are created

through energy savings the upgrades provide, and therefore, represent a new source of local investment. These green jobs are high quality, multi skill level jobs that directly benefit the local economy. With the recent cancellation of the EcoENERGY for homes program by the federal government, there is significant capacity in the market place to build such a program and a pressing demand to deliver one quickly before that capacity is eroded due the cuts of federal subsidies.

The Recommended Pilot Program:
Staff are proposing that a pilot of up to 500 homes be conducted over 12 months. Each eligible home could access up to $10,000 in financing for a total program portfolio of up to $5 million. The program is designed to align with the provincially-delivered LiveSmart incentive program that provides cash rebates for specific home energy retrofits.

Potential customers would access the program through a federally-certified home energy efficiency expert called an 'EcoENERGY Auditor'. This auditor will provide an objective assessment of which green retrofits are most appropriate for the individual Vancouver homeowner and which green retrofits from a prescriptive list the homeowner would be eligible to finance under the pilot program. The EcoENERGY Auditor would help the homeowner apply for financing through the program and other federal and provincial incentives, and the financial services provider, Vancity, would assess the homeowner's credit worthiness via a streamlined application form.

Once approved, the homeowner would undertake the work through a contractor of their choice and get a "close out" audit from the EcoENERGY Auditor to ensure that all of the work has been installed in accordance with the pilot program. The "close out" audit is an on site inspection of the completed retrofit that consists of a visual inspection, a home depressurisation test, and some simple energy use calculations. The homeowner would then start repaying the financing provided by Vancity on their City energy efficiency program bill (simply a line item added to the utility fee portion of their existing property tax bills) that would be issued quarterly.

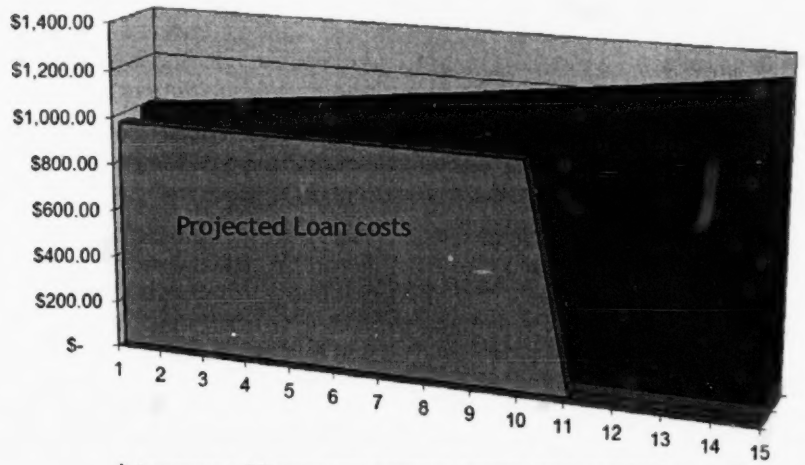
Staff have designed the pilot program based on the feedback of a five hundred person phone survey and two focus groups, as well as on the modelled results of over three thousand home energy efficiency retrofits in Vancouver. Staff have also factored in provincial retrofit incentives. Based on these inputs staff are confident that the energy savings associated with the upgrades can in most cases cover the costs of financing for the homeowner. This was identified as a key factor for subscription to the program by the survey participants.

Figure 1: Examples of Eligible Pilot Program Retrofit Activities & Estimated Savings

Eligible Retrofit Activities	Cost	Energy Cost Savings (over 10 years) *
EcoENERGY Audit	$450	
HE Condensing Furnace	4,000	$4,544
New Hot water tank	1,000	350
Attic Insulation	1,200	2190
Wall Insulation	2,400	2190
Weatherization	900	788
Basement Insulation	1,300	854

* Assumes a 2% per year average energy cost escalation, and the modelled energy use for a typical Vancouver home.

Figure 2: Graphic showing example of how a typical home can expect to save money with the pilot program



* Assumes a 2% per year average energy cost escalation, and the modelled energy use for a typical Vancouver home.

Vancity has agreed to finance up to $10,000 per home for up to 500 homes (a maximum of $5 million for the whole program), at a fixed interest rate of 4.5% for a 10-year term. The rate is fixed through the end of 2011 after which it may be adjusted in 2012 by a maximum of 50 basis points to 5%. Given this cost of financing is significantly lower than conventional unsecured personal loans and until such time when the requested Vancouver Charter

amendment is enacted, Vancity has requested that the City and the Foundation set aside up to $500,000 and $1 million respectively to be held in trust in a loan loss reserve (30% of the maximum loan portfolio) as security for the duration of the pilot program. See below "The Need for a Charter Amendment" for more information about how a potential charter amendment will change a future program. The loan loss reserve will earn a return of approximately 3.5% per annum.

Assuming 100% uptake of the $5 million financing program, the first $500,000 loan default (10% of the loan portfolio) will be covered by the Foundation. The next $1 million loan default (20% of the loan portfolio) will be jointly covered by the City and the Foundation at 50/50 up to $500,000 each. Any further loan defaults will be borne by Vancity.

What are the risks to the City?
The key financial risk associated with this pilot program is, in the event of loan defaults, the potential drawdown on the City's loan loss contribution of up to $500,000. To mitigate this risk, only homeowners with no property tax in arrears are eligible to participate in the program. In addition, the legal agreement between the City and Vancity will require Vancity to exercise the same credit assessment rigor that would normally apply for similar type of personal or credit card loans to ensure that loans are underwritten based on sound credit history. In the event of defaults, Vancity will exercise all reasonable loan collection processes that would normally apply before accessing the loan loss reserve.

Given the default rates on comparable financial products in the market, it is unlikely that the City's contribution to the loan loss reserve will be accessed.

How Will We Assess The Success of the Pilot?
Staff have set up strategic partnerships in order to answer the following four critical questions required to assess the pilot program's success:

1. Who is accessing the program?
2. What retrofit strategies are they financing?
3. How effective are the retrofits in reducing GHG's?
4. Are the homeowners achieving the expected cost savings?

Program partners agreeing to share information as part of this pilot include: Natural Resources Canada, The Provincial Government, Fortis BC, and BC Hydro. Additional customer data will also be collected via the program application form. Customers will have to agree to have their energy use monitored, although not shared publicly, for three years as a condition of receiving their financing in the program. All of these sources will provide Vancouver with more data on energy efficiency retrofits in single family homes than exists anywhere in the country at this time.

The Need for a Charter Amendment:
Staff are recommending that an amendment to the Vancouver Charter be sought in order to expressly authorize the City to act as a collection agent for financial institutions wishing to make green retrofit loans and to then add the loan to the tax bill in the same manner as real property taxes. This authority would allow the City, in the event that a homeowner defaulted on their energy efficiency loan, to pursue collection on the default as it would any other property tax or municipal utility payment that had fallen into arrears. Since taxes in arrears

take priority in a tax sale over debts to mortgage lenders and other creditors, such a mechanism would provide a level of security to lenders that would exceed that for secured mortgage loans and thus would negate the need for a loan loss reserve and allow the City to develop this program without utilizing taxpayer capital and instead utilizing only private sector capital. It should be noted that discussions are ongoing with the Canada Mortgage and Housing Corporation (CMHC) to ensure that any change in this regard for future City programs would not adversely affect federal mortgage insurance provisions or regulations.

Once the Province approves the Charter amendment, the pilot program could continue and be expanded without additional City capital. Further, the City could recover its contribution of $500,000 from the loan loss reserve as it would no longer be required.

FINANCIAL IMPLICATIONS

The City will set aside 10% of the total loan underwritten up to $500,000 in a loan loss reserve to be held in trust earning a return of approximately 3.5% per annum. This loan loss reserve will be adjusted to reflect the actual uptake throughout the program. Access to the loan loss reserve requires that Vancity exercise the same credit assessment rigor and loan collection processes that would normally apply for similar type of personal or credit card loans.

ENVIRONMENTAL IMPLICATIONS

As detailed above, if the pilot program proves successful and a Charter amendment is achieved, energy efficiency retrofit financing would be a key tool to Vancouver meeting its GHG reduction targets for existing buildings, as well as its community emissions targets. Based on projections from both customer surveys and historic uptake of other programs, the program could scale up to 3000 homes per year within 3 years yielding a 90,000 tonne annual reduction in greenhouse gases from existing buildings by 2020.

COMMUNICATIONS STRATEGY

Staff from the Sustainability Group and Communications are working closely together to develop a marketing strategy to promote this program in partnership with Vancity, Fortis BC and BC Hydro.

CONCLUSION

An on-property-tax-bill payment option, as identified by the "2020 Bright Green Future" report, is a fair and cost-effective tool for reducing GHGs from existing buildings, and a meaningful way to stimulate economic activity and create green jobs. This pilot program allows the City to move forward and test this initiative while limiting its risk and financial exposure in advance of the requested Vancouver Charter amendment. The partners in delivering this pilot provide significant leverage ($1 million reserve fund contribution from the Foundation and $5,000,000 in loans to homeowners from Vancity), and are expected to prove the necessity and desirability of a *Vancouver Charter* amendment.

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